

# **TECHNICAL SUPPORT FOR LOW LEVEL RADIOLOGICAL WASTE EVALUATION VARIOUS BASE REALIGNMENT AND CLOSURE ACTIVITIES**

## **Proposal**

### **INTRODUCTION AND OBJECTIVES**

On behalf of the United States Department of the Navy (DON), Battelle is preparing to implement an evaluation of practices currently applied at various Base Realignment and Closure (BRAC) cleanup sites to characterize and dispose of soil/debris containing Radium-226 (Ra-226), and classified as low level radiological waste (LLRW). The primary objectives of this Scope of Work (SOW) include the following:

- Evaluate current practices at BRAC bases, including Hunters Point Shipyard, Treasure Island, and Alameda Point, for identifying and disposing of LLRW;
- Develop recommendations to refine existing practices for identifying LLRW that are sufficiently conservative to ensure LLRW is identified and properly disposed of, but not so conservative that excessive quantities of non-LLRW are disposed of as LLRW;
- Assist Battelle with estimating potential savings to the DON if the recommendations provided in the evaluation are implemented;
- Develop a report that documents the LLRW evaluation and summarizes the conclusions and recommendations.

Battelle will be the primary contact with the DON's project team, which will be managed by the Naval Facilities Engineering Command, Engineering Service Center in Port Hueneme, California with support from the BRAC Program Management Office West and the DON's Radiological Affairs Support Office (RASO). As described in this proposal, Argonne will provide technical support to Battelle in specific areas.

### **PROPOSED SCOPE**

Qualified staff members at Argonne National Laboratory will provide the following technical support to Battelle during the LLRW evaluation requested by the DON:

#### **Work Element 2 – Data Review**

- 1) Review all applicable reports, data, background calculations, and information provided by the DON to gain a complete understanding of the current field practices for characterizing and disposing of LLRW at BRAC cleanup sites, and to take the lead on documenting the current field practices under Work Element 4 (see below).
- 2) Prepare for, travel to and from, and participate in a series of technical meetings with the DON in San Diego, California that are assumed to occur over two full days.
- 3) Take the lead on identifying recommendations to adjust the current practices such that the quantity of non-LLRW that is disposed of as LLRW is reduced, while soil/debris that exceeds the LLRW cleanup level of 1pCi/g plus background is identified and disposed of correctly.
- 4) Evaluate whether or not a less conservative field screening level could be used that provides assurance that LLRW is classified correctly, while reducing the volume of non-LLRW that is classified as LLRW. If a different screening level is recommended, the technical support subcontractor should consider the potential for

regulatory agency (and other project stakeholder) acceptance given their participation in the project planning process, and their concurrence on past planning documents.

#### Work Element 3 – Cost Analysis

- 1) Assist Battelle with determining the potential cost savings based on implementation of the recommendations to adjust the current practices identified under Work Element 2.

#### Work Element 4 - Reporting

- 1) Take the lead on developing the technical content of a draft and final report that documents the evaluation that is completed as part of the project, and summarizes the conclusions and recommendations. The conclusions and recommendations of the report are to be fully described, and supported by sound technical reasoning presented in other portions of the document. One of the primary expectations is that the recommendations, if implemented, will lead to an improved LLRW characterization/disposal process that can be measured as cost avoidance, reduced cleanup times, acceptance by regulatory agencies (and other project stakeholders), and/or other tangible or intangible benefits. The report needs to be clearly organized and well written in a manner that can be understood by the general public. The draft report will be issued to the Navy for review, after which the Navy will issue review comments.
- 2) Assist with addressing Navy review comments on the draft report and development of the final report.

### **BUDGET AND SCHEDULE**

The proposed effort will have a 9-month duration from the point of contract initiation.

Estimated Argonne costs for the proposed work are as follows:

Staff Effort (300 hours):	\$52K
Travel (1 trip for 2 days to CA for 2 people):	\$ 5K
M&S (technical editing/secretarial support/etc.):	\$ 8K
Total:	\$65K

### **KEY PERSONNEL**

The work as described above will be performed by Dr. Kurt Picel and Dr. Robert Johnson, both with the Environmental Science Division, Argonne National Laboratory.